REMARKS

Claims 34-44 and 53-56 are pending in the application. Claims 34-44 and 53-56 stand rejected. Claims 34 and 53 have been amended. In view of the amendments to the claims and the following remarks, Applicants respectfully request the rejections be withdrawn and the claims allowed.

Claims 34-40 and 53-56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,092,146 to Dell et al. ("Dell") in view of U.S. Patent No. 4,625,162 to Bosnyak ("Bosnyak"). The rejection is respectfully traversed.

Claim 34 recites a signaling circuit for encoding presence detect data. The signaling circuit comprises "a first signal encoding portion for encoding first presence detect information" and "a second signal encoding portion for encoding second presence detect information." The first presence detect information is "disposed in a hardwired circuit of an integrated circuit semiconductor memory device during the manufacturing of said integrated circuit semiconductor memory device." The second presence detect information is "disposed in a programmable circuit of said semiconductor memory device." According to claim 34,"said second presence detect information [is] related to only said integrated circuit semiconductor memory device"

Applicants respectfully submit that the Dell reference does not disclose presence detect data that is either "disposed in a hardwired circuit of an integrated circuit semiconductor memory device" or "disposed in a programmable circuit of said semiconductor memory device, [wherein] said second presence detect information [is] related to only said integrated circuit semiconductor memory device."

As set forth in Applicants prior Amendments, Dell is directed to a memory adapter for configuring SIMMs in a computer system that normally employs DIMMs.

Dell, col. 1, line 66, col. 2, lines 1-2. The adapter includes a programmable logic device for interrogating and configuring serial presence detect data. Dell, col. 2, lines 2-15. The programmable logic device configures the serial presence detect data by programming an EEPROM whose purpose is to store the serial presence detect data. Dell, col. 2, lines 4-5, 13-15. In other words, the programmable logic device outputs serial presence detect data to the EEPROM, which then stores the data. *Id.* The programmable logic device has certain output bits that are factory set. Dell, col. 5, lines 22-23. Other output bits of the programmable logic device are determined by SIMM and DIP switch inputs. Dell, col. 5, lines 23-24. The programmable logic device outputs are used to program the EEPROM with the serial presence detect data to allow a computer system to access the SIMMs. Dell, col. 5, lines 8-14. In Dell, the EEPROM may be programmed each time that a power-on-reset occurs. *See* Dell, Fig. 5.

Applicants respectfully submit that neither the Dell EEPROM nor the Dell programmable logic device include or suggest each of the elements and limitations recited by claim 34.

The Dell EEPROM is a completely reprogrammable device. In fact, the Dell EEPROM may be reprogrammed each time a power-on-reset occurs. Dell, Fig. 5. By the very nature of an EEPROM, an EEPROM is programmed after manufacture. EEPROMs are designed to allow reprogramming after manufacture, and Dell teaches nothing different. In other words, the Dell EEPROM cannot include both a first signal encoding portion and a second signal encoding portion, wherein the first signal encoding portion encodes information that is "disposed in a hardwired circuit of an integrated circuit semiconductor memory device *during the manufacturing of said integrated circuit semiconductor memory device,*" as recited by claim 34. Dell does not teach such a specialized EEPROM device.

The Dell programmable logic device also fails to read on the elements recited by claim 34. The Dell programmable logic device includes output bits that are determined according to certain preprogrammed characteristic tables of the programmable logic device. Dell, col. 2, lines 11-13, Table 1. According to Table 1 of Dell, certain serial presence detect data bytes are factory set. Other output bits of the programmable logic device are determined by SIMM and DIP switch inputs. Dell, col. 5, lines 23-24. The SIMM and DIP switch inputs cause the programmable logic device to output serial presence detect data according to its preprogrammed tables. The serial presence detect data stored in the tables of the programmable logic device is, by nature of the purpose of a lookup table, not limited to specific serial presence detect data for a specific SIMM. On the contrary, the serial presence detect data stored in the programmable logic device relates to multiple SIMMs, thus allowing a user to select among the multiple SIMM devices to be used. *See* Dell, Tables 2.1, 2.2, 3.1, 3.2, 4.1, 4.2, 4.3. In other words, the Dell programmable logic device does not include "presence detect information related to only said integrated circuit semiconductor memory device," as recited by claim 34, but instead includes serial presence detect information relating to multiple types of memory devices.

In addition, as Applicants established in the parent application, Dell does not disclose, teach or suggest that its memory adapter is "an integrated circuit semiconductor memory device" as recited in claim 34. The Dell EEPROM and the Dell programmable logic device are located on a memory adapter, not on an integrated circuit semiconductor memory device.

Bosnyak also fails to remedy the shortcomings of Dell. Bosnyak is directed to the simultaneous testing of a plurality of fuses in a fusible link array. Bosnyak, col. 2, lines 9-11. Bosnyak is relied upon by the Examiner to teach that array bits may be set to

one of two logical states by either keeping the bit fuse intact (thus creating a short circuit) or by blowing the fuse to create an open circuit. Office Action, p. 4. However, Bosnyak does nothing to correct Dell's deficiencies. Specifically, Bosnyak does nothing to show how the Dell EEPROM can include "information disposed in a hardwired circuit ... during the manufacturing of said integrated circuit semiconductor memory device." Bosnyak also fails to show how the Dell programmable logic device can contain "presence detect information relating only to said integrated circuit semiconductor memory device." And finally, Bosnyak fails to show how the Dell memory adapter is an integrated circuit semiconductor memory device.

For at least the foregoing reasons, Applicants respectfully submit that claim 34 is allowable over the combination of Dell and Bosnyak. Claims 35-40 depend from claim 34 and are allowable along with claim 34 for at least the reasons set forth above and on their own merits.

Claim 53 recites a method of operating a memory integrated circuit. The method includes the act of "receiving a first signal at a memory controller from said memory integrated circuit, said first signal encoding first presence detect information hardwired into said memory integrated circuit during manufacturing of said memory integrated circuit." The method of claim 53 also includes "receiving a second signal at a memory controller from said memory integrated circuit, said second signal encoding second presence detect information programmed into said memory integrated circuit subsequent to manufacturing of said memory integrated circuit, said second presence detect information related only to said memory integrated circuit." Applicants respectfully submit that the combination of Dell and Bosnyak fails to teach or suggest the receipt of a signal encoding first presence detect information hardwired into a memory integrated circuit and "receiving a second signal at a memory controller from

said memory integrated circuit, said second signal encoding second presence detect information programmed into said memory integrated circuit subsequent to manufacturing of said memory integrated circuit, said second presence detect information related only to said memory integrated circuit" as recited in claim 53 and as explained above. As such, claim 53 is allowable over the combination of Dell and Bosnyak. Claims 54-56 depend from claim 53 and are allowable along with claim 53 for at least the reasons set forth above and on their own merits.

Applicants respectfully request that the rejection be withdrawn and claims 34-40 and 53-57 be allowed.

Claims 41-44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dell in view of Bosnyak. The rejection is respectfully traversed.

Claims 41-44 depend from claim34 and are allowable along with claim 34 for at least the reasons set forth above and on their own merits. Accordingly, the rejection should be withdrawn and the claims allowed.

Claims 34-44 and 53-56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dell in view of Bosnyak. The rejection is respectfully traversed. Because the combination of Dell and Bosnyak fails to teach or suggest each of the elements and limitations of independent claims 34 and 53, as explained above, claims 34 and 53 are allowable. Claims 35-44 depend from claim 34, and are also allowable for at least the same reasons and on their own merits. Claims 54-56 depend from claim 53, and are also allowable for at least the same reasons and on their own merits. Accordingly, the rejection should be withdrawn and the claims allowed.

Claims 34-44 and 53-56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dell in view of Bosnyak, and further in view of U.S. Patent No. 6,275,259 to Gowda et al. ("Gowda"). The rejection is respectfully traversed.

Claim 34 recites, among other things, a signaling circuit for encoding presence detect data. The signaling circuit comprises "a first signal encoding portion for encoding first presence detect information" and "a second signal encoding portion for encoding second presence detect information." The first presence detect information is "disposed in a hardwired circuit of an integrated circuit semiconductor memory device during the manufacturing of said integrated circuit semiconductor memory device." The second presence detect information is "disposed in a programmable circuit of said semiconductor memory device." According to claim 34, said "second presence detect information [is] related to only said integrated circuit semiconductor memory device." As set forth above, the combination of Dell and Bosnyak fails to disclose, teach or suggest these limitations (as well as others mentioned above). Applicants respectfully submit that Gowda, which has been cited as teaching hardwiring circuitry, also fails to disclose, teach or suggest these limitations.

As such, the cited combination fails to disclose, teach or suggest the limitations of claim 34. Claims 35-40 depend from claim 34 and are allowable along with claim 34 for at least the reasons set forth above and on their own merits. Applicants also respectfully submit that claim 53 is allowable over the combination of Dell, Bosnyak and Gowda for at least the reasons set forth above. Claims 54-56 depend from claim 53 and are allowable along with claim 53 for at least the reasons set forth above and on their own merits.

Accordingly, the rejection should be withdrawn and the claims allowed.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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